TARCÍSIO SOUZA DE MELO

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PROFESSIONAL SUMMARY

Firmware/Software Engineer with extensive experience in embedded systems, Linux development, and industrial application development (Backend/Frontend). Specialized in firmware for microcontroller families including ESP32/ESP-IDF, STM32 (M0, M3, and M4), AVR, Nordic, and 8051. Skilled in communication protocols, automation, and IoT, with primary proficiency in C, C++, and Golang. Expertise covers driver development, firmware architectures, FreeRTOS, hardware/software integration, and the creation of CLI tools and full-stack solutions for industrial environments.

PROFESSIONAL EXPERIENCE

- **A4 Solutions – Senior Hardware/Firmware Developer** (Apr/2025 – Present)
    - Firmware development for occupational safety systems and industrial automation.
    - Implementation of protocols, configuration structures, and drivers for microcontrollers.
    - Development of CLI applications in Golang
    - Backend and frontend development for industrial applications
- **Conecto Sistemas – Mid-Level Programmer (C, C++, Linux)** (Mar/2023 – May/2025 - 2 years and 2 months)
    - Development of solutions for commercial automation using Linux and C/C++.
    - Creation of services, communication modules, and advanced scripts.
- **AEPH do Brasil – Systems Programmer (C)** (Jun/2019 – Mar/2023 - 3 years and 9 months)
    - Firmware development for industrial and commercial scales.
    - Implementation of drivers, filtering algorithms, and internal protocols.

EDUCATION

- **Computer Engineering** – UNIVESP (Bachelor's Degree) (Concluding in 2025)
- **Information Technology with Emphasis on IoT** – UNIVESP (Bachelor's Degree) (2024)
- **Control and Automation Engineering** – IFSP (Bachelor's Degree) (2019)
- **Networks and Distributed Computing** – IFMT (Lato Sensu Post-Graduation) (2026)
- **Software Engineering** – Faculdade Líbano (Lato Sensu Post-Graduation) (2025)
- **Occupational Safety Engineering** – Faculdade Líbano (Lato Sensu Post-Graduation) (2025)

TECHNICAL SKILLS

- C (Advanced), Golang (Advanced), C++ (Intermediate), Python (Intermediate), Rust (Intermediate), Dart (Intermediate), Shell Script (Intermediate)
- ESP32, ESP-IDF, FreeRTOS, UART, SPI, I2C, USB, TCP/IP
- Embedded Linux, Git, real hardware debugging, IoT automation

LANGUAGES

- **English:** Advanced reading, Basic writing, Basic conversation